REMARKS

The Office Action dated April 21, 2004 has been reviewed and carefully considered. <u>Claim 2 has been redrafted into independent form as new claim 9, with the addition of a comma that does not change the scope of the claim.</u> Claims 1-9 are now pending, of which the independent claims are 1 and 4. Claims 1, 3, 4 and 6 have been amended. Reconsideration of the above-identified application, as amended and in view of the following remarks, is respectfully requested.

Claims 7 and 8 stand provisionally rejected under 35 U.S.C. 101 for statutory double patenting based on claims 9 and 10 of co-pending applications nos. 09/850,347 and 09/850,348.

A rejection based on statutory type double patenting can only apply where the purportedly conflicting claims are "coextensive in scope." <u>MPEP 804.02</u>.

Notably, although claims 7 and 8 of the present application both depend from each of claims 4, 5 and 6, the instant rejection has apparently not been applied to the latter claims.

Claim 4 as amended, and therefore its dependent claims 7 and 8, recites, "A system . . . characterized in that . . . the matcher (46) is arranged for making a selection of pixels of the block from the first image, which are <u>visible</u> in the area to be matched from the second image . . . characterized in that . . . the matcher (46) is arranged for calculating a matching error, said pixels of the block that are not selected being <u>excluded</u> from the calculation." Support for the amendment of claim 4 is found in the specification (e.g., page 7, lines 25-27).

Neither of the cited references claims, much less discloses or suggests, the above-quoted limitation of claims 7 and 8 of the present application. The cited claims of the cited reference are therefore not "co-extensive in scope" with claims 7 and 8 of present application. The instant statutory double patenting rejection is invalid for at least this reason.

Claims 1 and 4 stand provisionally rejected under obviousness-type double patenting over claims 1 and 5 of co-pending application no. 09/850,347 ("the '347 application") in view of U.S. Patent No. 6,075,875 to Gu.

The rejection is traversed by the applicant on procedural and substantive grounds.

On substantive grounds, Gu cannot make up for what is not disclosed or suggested in the cited application. In particular, and by way of example, the above-quoted limitations of claim 4 of the present invention correspond to claim limitations of claim 1 of the present invention. These claim limitations are not-claimed in the cited co-pending application. The deficiencies in Gu are set forth further below in detail. For at least this reason, the rejection fails on substantive grounds.

Procedurally, obviousness-type double patenting is subject to the restrictions of 35 U.S.C. 103, which provides:

> (c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of **section 102 of** this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

The present and co-pending applications were filed in the U.S. on the same day. The co-pending could therefore only qualify as prior art under 35 U.S.C. 102(e), (f) or (g) if the appropriate circumstances were to exist. Such an inquiry is moot, however, in view of 35 U.S.C. 103(c). Accordingly, even if the substantive grounds for invalidity of the rejection could be overcome, the rejection would still be invalid on procedural grounds.

The title stands objected to as non-descriptive, and a new title that is descriptive has now been provided.

The specification stands objected to under 37 CFR 1.77(b) for not following suggested guidelines on captioning the various section of the application.

This objection is improper, because the recommended guidelines for captioning the various sections of the specification are not mandatory. The use of the word "should" in 37 CFR 1.77(b), instead of the word "must" or "shall," indicates the elective nature of the guidelines. <u>Reconsideration and withdrawal of the objection is respectfully requested</u>.

Item 7 of the Office Action suggests that there has been a failure to comply with 37 CFR 1.98(a)(1) since copies have not been provided of references cited in a submitted search report issued abroad in reference to a corresponding foreign application.

Although the references cited in the search report are background references, and believed to be non-material and therefore not required to be submitted,

(MPEP 2001.06), we are enclosing copies of the cited references, GB2279531, WO9922520, WO9120155 as suggested by the Examiner.

The drawings stand objected to under 37 CFR 1.83(a) for failure to label the box elements. Although, as set forth above, rule 83(a) does not require that all boxes in FIGs. 1 and 2 be labeled, the applicants have followed the Examiner's suggestion as far as practicable by labeling all the boxes except that denoted by reference number 44, the latter being too small to include an annotation. Accordingly, the annotations added to boxes 12, 15, 43, 46, 47, 41, 42 in the enclosed replacement sheet for FIGs. 1 and 2 are, respectively, OBJECT 1, OBJECT 2, COLLECTOR, MATCHER, SELECTOR, IMAGE PROCESSOR and SCREEN.

As suggested by the Examiner, the purported informality of omitting a comma in method claim 1 has now been alleviated by inserting the comma, thereby conforming the punctuation to that of corresponding system claim 4.

Claims 4 and 7 stand objected to for inclusion of a respective bullet preceding each claim element. No support is cited for the objection, nor do the applicants believe such support exists. As a practical matter, moreover, the applicants note that inclusion or exclusion of the bullets does not change the meaning or scope of the claims. In fact, the Patent Office publication of the application omits the bullets, and any patent to issue appears likely to omit the bullets.

Claims 3 and 6 stand rejected under 35 U.S.C. 112, second paragraph, as indefinite for use of the phrase "based on depth." This phrase has now been replaced

with "based on depth, of the pixels to be compared, in their respective images." Support

for the amendment is found in the specification (e.g., page 1, line 27; page 8, line 10).

The applicants believe the basis for the rejection has accordingly been overcome.

Claims 1-6 stand rejected under 35 U.S.C. 102(e) as anticipated by U.S.

Patent No. 6,075,875 to Gu.

Claim 4 recites, "A system . . . characterized in that . . . the matcher (46) is

arranged for making a selection of pixels of the block from the first image, which are

visible in the area to be matched from the second image, and . . . is arranged for

calculating a matching error, said pixels of the block that are not selected in said selection

being excluded from the calculation."

The Office Action suggests two occasions in which Gu processing is

deemed to correspond to "calculating a matching error," although neither instance entails

the making of "a selection of pixels of the block from the first image, which are visible in

the area to be matched from the second image . . . said pixels of the block that are not

selected in said selection being excluded from the calculation."

The first occasion relates to finding in frame N+1 a pixel block that

corresponds to that selected by the user in frame N, in preparation for sparse motion

vector generation (col. 14, lines 25-29).

Although pixel selection in building the block in frame N is limited to those

pixels within an object, pixel selection selects pixels regardless of whether the pixel is

visible or invisible (col. 9, lines 58-60; col. 10, lines 8-24). The first occasion

accordingly fails to involve a "system . . . characterized in that . . . the matcher (46) is

arranged for making a selection of pixels of the block from the first image, which are visible in the area to be matched from the second image, and . . . is arranged for calculating a matching error, said pixels of the block that are not selected in said selection being excluded from the calculation."

The second occasion cited by the Office Action (col. 15, line 50) relates to a later stage of Gu processing, i.e., dense motion vector generation (col. 14, line 49). Just prior to this stage, sprite formation is utilized to compensate for occluded pixels in the object whose pixels will subsequently be subject to the dense motion vector generation (col. 9, line 64 – col. 10, line 2; col. 10, lines 14-24; col. 33, lines 10-14). The pixel occlusion compensated for may involve occlusion in the first image, second image or, to different extents, in both images. In any event, the selection of pixels is made based on whether the pixel is within the object (FIG. 6, ref. no. 228), regardless of whether the pixel is visible or invisible.). The second occasion accordingly fails to involve a "system . . . characterized in that . . . the matcher (46) is arranged for making a selection of pixels of the block from the first image, which are visible in the area to be matched from the second image, and . . . is arranged for calculating a matching error, said pixels of the block that are not selected in said selection being excluded from the calculation." For at least the foregoing reasons, Gu fails to anticipate the invention as recited in claim 4. Nor would the above-quoted limitations of claim 4 be obvious in view of Gu.

Claim 1 is a method claim corresponding to system claim 4, and likewise distinguishes patentably over the cited reference.

As to the other rejected claims, each depends from a base claim and is deemed to be patentable over Gu at least due to its dependency, although each warrants further consideration based on its additional, individual merits.

For example, original claim 2 has now been redrafted into independent form as new claim 9 with the addition of the comma for consistency with claim 4. Claim 9 recites, "selecting a pixel based on a comparison with other pixels of the block from the first image (10) which are found at the <u>same</u> position in the area to be matched from the second image (11)."
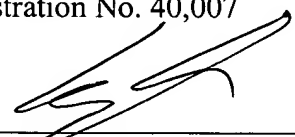
The second full paragraph of page 8 of item 13 of the Office Action tacitly acknowledges, e.g., by not mentioning the word "<u>same</u> (specification, page 8, line 6: "<u>same</u>," that Gu fails to disclose or suggest the above-quoted limitation of claim 9. Accordingly, claim 9 is not anticipated by Gu. Reconsideration and withdrawal of the rejection is respectfully requested.

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

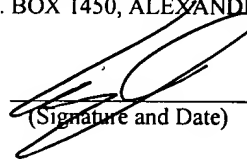Respectfully submitted,

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